

ABSTRACT: A process and apparatus for continuously removing ions from solution in proportion to their prevalence in solution using an ion exchange media. The process comprises: (a) mixing fresh or regenerated ion exchange media and a feed solution containing diverse ions; (b) reacting the resulting slurry to produce a product slurry comprised of loaded ion exchange media and stripped product solution; (c) separating the loaded ion exchange media from the product slurry; (d) regenerating the loaded ion exchange media by counter current contact with a regenerant; and (e) conducting the process steps continuously and concurrently, whereby a continuous circuit is produced for dosing, loading, separating, and regenerating the ion exchange media, and whereby more concentrated ions are preferentially depleted in the product solution. An apparatus particularly adapted to practice the process and to treat sodic water is also provided.